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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			EXAMINER BATTULA, PRADEEP CHOUDARY	
			ART UNIT 3722	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/531,258

Applicant(s)

KELLER, MARIO

Examiner

Pradeep C. Battula

Art Unit

3722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/6/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the diffraction structure in the security thread must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 2, 4, 9, 11 – 15, 17 – 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burchard et al. (Burchard; U.S. 5,688,587).

In regards to Claims 1, 14, 15, and 22, Burchard security element comprising a cover layer 4 having gaps 5 in the form of characters (letters) or patterns forming visually and/or machine readable first information (Column 5, Lines 9 – 15, 20 – 24; Figure 7, Items 4, 5), wherein a printed image 8 forming visually and/or machine readable second information is disposed in the gaps in register (Column 5, Lines 20 – 24; Figure 7, Item 8) and furthermore wherein the security element is a security thread (Column 4, Lines 26 – 29).

Burchard does not disclose and further wherein the first and second information is different.

In a different embodiment of Burchard the print 8, which is disposed in a metal free area, can be of a design such as a flag (Column 4, Lines 38 – 46). Furthermore, Burchard discloses that the first and second information disposed in one another are only the same form so that the size of the second information would allow for it to be disposed within the first information. Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to reduce the size of

Burchard's flag/design indicia 8 and place it in the first indicia because such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976).

In regards to Claim 2, as applied to Claim 1, Burchard further discloses wherein the cover layer is opaque at least in partial areas (Column 2, Lines 39 – 43; Column 4, Line 15 – 18).

In regards to Claim 4, as applied to Claim 1, Burchard further discloses wherein the cover layer is semitransparent at least in partial areas (Column 1, Lines 7 – 12).

In regards to Claim 9, as applied to Claim 1, Burchard further discloses wherein the printed image is finely structured and/or of high resolution (Figure 7, Item 8; The printed ink is very small inside the gap relative to the banknote it is on and therefore finely structured).

In regards to Claim 11, as applied to Claim 1, Burchard further discloses wherein the printed image is multicolored or formed of inks with different pigment content (Column 4, Lines 38 – 44)

In regards to Claim 12, as applied to Claim 1, Burchard further discloses wherein the printed image forms letters, numbers or geometrical figures (Column 5, Lines 20 – 24).

In regards to Claim 13, as applied to Claim 1, wherein the printed image is printed into the gaps by a digital printing method even though product-by-process claims are limited by and defined by the process, determination of patentability is based

Art Unit: 3722

on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

In regards to Claim 17, as applied to Claim 1, Burchard further discloses the security element is on a security paper (Column 2, Lines 33 – 42).

In regards to Claim 18, as applied Claim 17, wherein the security element is present in the form of a thread or band (Column 4, Lines 26 – 29).

In regards to Claim 19, as applied Claim 18, Burchard further discloses wherein the security element is embedded into the security paper as a windowed security thread (Column 4, Lines 26 – 29).

In regards to Claim 20, as applied to Claim 18, Burchard further discloses wherein the security element is disposed completely on the surface of the security paper (Column 4, Lines 29 – 34).

In regards to Claim 21, as applied to Claim 1, Burchard further discloses wherein the document is a document of value having the security element (Column 4, Lines 26 – 27).

2. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burchard in view of Schmitz et al. (Schmitz; U.S. 5,573,639).

In regards to Claim 3, as applied to Claim 1, Burchard does not disclose wherein the cover layer is screened at least in partial areas, said screen being selected from the

Art Unit: 3722

group consisting of a dot screen, a line screen of and a screen of repeating similar screen elements.

Schmitz discloses a substrate 3 in a security element 2 having a cover layer 4 having a first information in a pattern and having a type of gap also in a pattern (Column 3, Lines 11 – 16, 24 – 26; Figure 1, Items 2, 3; Figure 2, Item 4). Schmitz further discloses machine readable or visual second information 5 with the first and second information being different (Column 3, Lines 26 – 30; Figure 2, Item 5). Schmitz further discloses wherein the cover layer is screened in at least partial areas by a group consisting of a dot screen, line screen, and a screen of repeating similar screen elements (Column 3, Lines 45 – 48). Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide Kaule with the screening of Schmitz in order to provide shapes and information that is recognizable (Column 3, Lines 48 – 52).

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burchard in view of Kaule (U.S. 5,516,153).

In regards to Claim 5, as applied to Claim 1, Burchard discloses wherein the cover layer comprises a metal coating (Column 4, Lines 36 – 39).

Burchard does not disclose wherein the metal coating selected from the group consisting of aluminum, gold, copper, iron, nickel and an alloy containing one or more of said metals.

Kaule discloses a security element comprising a cover layer 4 having gaps 5 in the form of characters or patterns forming visually and/or machine readable first

information (Column 3, Lines 35 – 38; Figure 3, Items 4, 5), wherein a printed image forming visually and/or machine readable second information is disposed in the gaps in register (Column 3, Lines 38 – 50), and that the cover layer comprises a metal coating, the metal coating selected from the group consisting of aluminum, gold, copper, iron, nickel and an alloy containing one or more of said metals (Column 1, Lines 66 – 67 → Column 2, Lines 1 – 11).

4. Claim 6 – 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burchard in view of Heim (U.S. 2005/0151368 A1).

In regards to Claim 6, as applied to Claim 1, Burchard does not disclose wherein cover layer contains a dielectric layer structure that produces different color effects in reflected light upon a change of viewing angle.

Heim discloses of a security element having a cover layer D and A₂ wherein gaps 9 exist which forms characters wherein the cover layer has a dielectric layer (Paragraph 0064, Lines 1 – 6; Paragraph 0063, Lines 1 – 3 [designates “D” as Dielectric]; Figure 8, Items D, A₂ 9). Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the cover layer of Burchard with a dielectric layer in order to provide the security element of Burchard with a color changing capability which provides another security measure.

In regards to Claim 7, as applied to Claim 6, Burchard modified by Heim further discloses wherein the dielectric layer structure is opaque or semitransparent (Paragraph 0018, Lines 1 – 2; states that the materials are primarily transparent but do not have to be and therefore would be opaque or semi-transparent; Heim).

In regards to Claim 8, as applied to Claim 1, Burchard does not disclose wherein the security element contains a plastic layer with a surface relief in the form of a diffraction structure embossed thereinto.

Heim discloses of a security element having a cover layer D and A₂ wherein gaps 9 exist which forms characters wherein the cover layer has a dielectric layer (Paragraph 0064, Lines 1 – 6; Paragraph 0063, Lines 1 – 3 [designates "D" as Dielectric]; Figure 8, Items D, A₂ 9) wherein the security element further discloses a plastic layer with a surface relief 8 in the form of a diffraction structure embossed thereinto (Paragraph 0025, Lines 1 – 3; Paragraphs 0057 – 0059; Figure 5, item 8). Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the structures of the security element of Heim with the security structure of Burchard in order to create a security element with the additional feature of a color shift (Paragraph 0059; Heim).

In regards to Claims 16 and 23, as applied to Claim 1, Burchard discloses a document of value (Column 4, Lines 26 – 27).

Burchard does not disclose wherein the security element forms a transfer element or a label for protecting an object of value such as a document of value.

Heim discloses of a security element having a cover layer D and A₂ wherein gaps 9 exist which forms characters wherein the cover layer has a dielectric layer (Paragraph 0064, Lines 1 – 6; Paragraph 0063, Lines 1 – 3 [designates "D" as Dielectric]; Figure 8, Items D, A₂ 9) wherein the security element further discloses a plastic layer with a surface relief 8 in the form of a diffraction structure embossed

thereinto (Paragraph 0025, Lines 1 – 3; Paragraphs 0057 – 0059; Figure 5, item 8) and exists separate from a security thread and can exist as a label (Paragraph 0047, Lines 1 – 5; Figure 5, Item 2; Paragraph 0042; Paragraph 0045). Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the label 2 of Heim to the plastic substrate of Burchard in order to provide a security document with multiple security elements.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burchard in view of Kaule et al. (U.S. 6,344,261)

In regards to Claims 10 and 11, as applied to Claim 1, Burchard does not disclose wherein the printed image contains an ink containing pigments selected from the group consisting of luminescent pigments, magnetic pigments, liquid crystal pigments and interference layer pigments.

Kaule et al. discloses of using luminescent substances in multicolor inks that are applied to a security thread (Column 4, Lines 65 – 67 → Column 5, Lines 1 – 6). Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the printed image 8 ink with luminescent substances in order to provide a security thread with an additional authentication feature.

6. Claims 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burchard in view of Minnetian et al. (Minnetian; U.S. 5,759,420).

In regards to Claims 24 and 26, Burchard discloses method for producing a security element with a printed image and a cover layer 4, the cover layer having gaps 5

Art Unit: 3722

in the form of characters or patterns (Column 5, Lines 9 – 15, 20 – 24; Figure 7, Items 4, 5), comprising first applying the cover layer with the gaps to a carrier film (Column 5, Lines 20 – 24; inherent since the negative gap needs to exist before the printing 8 can be applied) and then producing the printed image 8 in the gaps (Column 5, Lines 20 – 24).

Burchard does not disclose producing the printed image in the gaps of the cover layer in register by digital printing.

Minnetian discloses of ink jet printing inside of gaps and recesses provided on the surface of a security document (Column 4, Lines 34 – 39). Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use ink jet printing to provide the printed image in the gaps of Burchard in order to have an inexpensive printing system (Column 4, Lines 38 – 39).

In regards to Claim 25, as applied to Claim 24, Burchard modified by Minnetian further discloses wherein the cover layer comprises a metal layer (Column 4, Lines 34 – 39; Burchard),

Burchard modified by Minnetian does not disclose the metal layer is applied by vapor deposition or by electron-beam vaporization.

Burchard discloses that it is well known in the art to deposit metallic films on a substrate by vapor deposition (Column 2, Lines 7 – 20). Therefore it would have been obvious to a person having ordinary skill in the art to apply a metal layer by vapor deposition to Burchard modified by Minnetian in order to provide a film metal layer instead of a coating.

Art Unit: 3722

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pradeep C. Battula whose telephone number is 571-272-2142. The examiner can normally be reached on Mon. - Thurs. & alternating Fri. 7:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica S. Carter can be reached on 571-272-4475. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PCB
Patent Examiner
November 6, 2007

Monica S. Carter
MONICA CARTER
SUPERVISORY PATENT EXAMINER